

Anexos

ANEXO 1

Cálculo de valor U de los elementos de envolvente.

a. Elementos constructivos de envolvente.

Muros	Material	λ (W/mK)	Espesor (m)	Resistencia (m ² *K/w)	Transmitancia térmica (W/m ² K)
				$R = \text{Espesor} / \text{Coef.}$	$U = 1 / R_t$
tipo 1.1			Rsi	0.13	
	Ladrillo	0.84	0.15	0.178571429	
			Rse	0.04	
			$\sum R + R_{si} + R_{se}$	0.348571429	2.87
tipo 1.2			Rsi	0.13	
	Ladrillo	0.84	0.15	0.178571429	
	Ladrillo	0.84	0.15	0.178571429	
			Rse	0.04	
tipo 1.3			$\sum R + R_{si} + R_{se}$	0.527142857	1.90
			Rsi	0.13	
	Ladrillo	0.84	0.15	0.178571429	
	Ladrillo	0.84	0.15	0.178571429	
tipo 2	Ladrillo	0.84	0.15	0.178571429	
			Rse	0.04	
			$\sum R + R_{si} + R_{se}$	0.705714286	1.42
			Rsi	0.13	
tipo 3	Panel de hormigón de fachada	2	0.05	0.025	
	Aislamiento	0.15	0.05	0.333333333	
	Bloque de hormigon 9cm	0.62	0.09	0.14516129	
	Enlucido de mortero	0.5	0.02	0.04	
tipo 3			Rse	0.04	
			$\sum R + R_{si} + R_{se}$	0.713494624	1.40
			Rsi	0.13	
	Panel de acero	50.2	0.0025	4.98008E-05	
tipo 3	Aislamiento	0.15	0.05	0.333333333	
	Bloque de hormigon 9cm	0.62	0.09	0.14516129	
	Enlucido de mortero	0.5	0.02	0.04	
			Rse	0.04	
tipo 3			$\sum R + R_{si} + R_{se}$	0.688544424	1.45

Suelos	material	coef.	Espesor (m)	resistencia (m ² *K/w)	Transmitancia térmica (W/m ² K)
				$R = \text{Espesor} / \text{Coef.}$	$U = 1 / R_t$
tipo 1			Rsi	0.17	
	Baldosa	1.3	0.02	0.015384615	
	mortero	0.5	0.01	0.02	
	hormigón armado	1.63	0.07	0.042944785	
	piedra	1.83	0.2	0.109289617	
			Rse	0.04	
			$\sum R + R_{si} + R_{se}$	0.397619018	2.51

Techos	Material	λ (W/mK)	Espesor (m)	Resistencia (m ² *K/w)	Transmitancia térmica (W/m ² K)
				$R = \text{Espesor} / \text{Coef.}$	$U = 1 / R_t$
tipo 1			Rsi	0.1	
	mortero	0.5	0.02	0.04	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.2	0.357142857	
	cámara de aire ligeramente ventilada	0.32	0.43	1.34375	
	Gypsum	0.25	0.01	0.04	
			Rse	0.04	
			$\sum R + R_{si} + R_{se}$	1.963837642	0.509207064
tipo 2			Rsi	0.1	
	mortero	0.5	0.02	0.04	
	hormigón armado	1.63	0.28	0.171779141	
				0.04	
			$\sum R + R_{si} + R_{se}$	0.351779141	2.84269271
tipo 3			Rsi	0.1	
	gravilla	0.36	0.01	0.027777778	
	mortero	0.5	0.01	0.02	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.35	0.625	
	mortero	0.5	0.01	0.02	
			Rse	0.04	
			$\sum R + R_{si} + R_{se}$	0.875722563	1.141914166

b. Elementos divisorios (particiones).

Muros	Material	λ (W/mK)	Espesor (m)	Resistencia (m ² *K/w)	Transmitancia térmica (W/m ² K)
				R=Espesor/Coef.	U=1/Rt
tipo 1.1			Rsi	0.13	
	Ladrillo	0.84	0.145	0.172619048	
			Rse	0.13	
			$\Sigma R+Rsi+Rse$	0.432619048	2.31
tipo 1.2			Rsi	0.13	
	Ladrillo	0.84	0.145	0.172619048	
	Ladrillo	0.84	0.145	0.172619048	
			Rse	0.13	
tipo 2			$\Sigma R+Rsi+Rse$	0.605238095	1.65
			Rsi	0.13	
	Enlucido de mortero	0.5	0.02	0.04	
	Bloque de hormigon 9cm	0.62	0.09	0.14516129	
	Enlucido de mortero	0.5	0.02	0.04	
			Rse	0.13	
			$\Sigma R+Rsi+Rse$	0.48516129	2.06

Suelos	material	coef.	Espesor (m)	resistencia (m ² *K/w)	Transmitancia térmica (W/m ² K)
				$R = \text{Espesor} / \text{Coef.}$	$U = 1 / R_t$
tipo 1			Rsi	0.17	
	Baldosa	1.3	0.02	0.015384615	
	mortero	0.5	0.01	0.02	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.25	0.446428571	
			Rse	0.17	
			$\Sigma R + R_{si} + R_{se}$	0.864757972	1.156392924
tipo 2			Rsi	0.17	
	Baldosa	1.3	0.015	0.011538462	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.35	0.042944785	
	mortero	0.5	0.015	0.625	
			Rse	0.17	
			$\Sigma R + R_{si} + R_{se}$	1.062428032	0.941240225
tipo 3			Rsi	0.17	
	Parquet	0.17	0.015	0.088235294	
	mortero	0.5	0.015	0.03	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.25	0.446428571	
			Rse	0.17	
			$\Sigma R + R_{si} + R_{se}$	0.947608651	1.05528796
tipo 4			Rsi	0.17	
	Parquet	0.17	0.015	0.088235294	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.35	0.625	
	mortero	0.5	0.015	0.03	
			Rse	0.17	
			$\Sigma R + R_{si} + R_{se}$	1.126180079	0.887957458
tipo 5			Rsi	0.17	
	microcemento	0.46	0.015	0.032608696	
	mortero	0.5	0.015	0.03	
	hormigón armado	1.63	0.07	0.042944785	
	Bloque de homigón ligero	0.56	0.2	0.357142857	
	cámara de aire ligeramente ventilada	0.32	0.43	1.34375	
	Gypsum	0.25	0.01	0.04	
			Rse	0.17	
			$\Sigma R + R_{si} + R_{se}$	2.186446338	0.457363157

c. Elementos bajo el nivel del suelo.

Muros	Material	λ (W/mK)	Espesor (m)	Resistencia (m ² *K/w)	Transmitancia térmica (W/m ² K)
				R=Espesor/Coef.	Tabla 5
Tipo 1	Ladrillo	0.84	0.145	0.172619048	
	Ladrillo	0.84	0.145	0.172619048	
			ΣR	0.345238095	1.17
Tipo 2	Bloque de hormigón 9cm	0.62	0.09	0.14516129	
	Enlucido de mortero	0.5	0.02	0.04	
			ΣR	0.18516129	1.22

Suelos	material	coef.	Espesor (m)	resistencia (m ² *K/w)	Perímetro	Área	B'	Profundidad	Transmitancia térmica (W/m ² K)
				R=Espesor/Coef.			B'=A/(0.5*P)		Tabla 4
	Parket	0.17	0.015	0.088235294	9.86	71.21	14.44421907	0.9	
	mortero	0.5	0.015	0.03					
	hormigón armado	1.63	0.07	0.042944785					
	piedra	1.83	0.2	0.109289617					
			ΣR	0.270469697					0.30
	microcemento	0.46	0.015	0.032608696	8.17	64.24	15.72582619	1.62	
	hormigón armado	1.63	0.07	0.042944785					
	piedra	1.83	0.2	0.109289617					
			ΣR	0.184843098					0.25

Se obtiene la transmitancia térmica de las tablas 4 y 5 del documento de cálculo de parámetros característicos de la envolvente(DA DB-HE / 1. Cálculo de Parámetros Característicos de La Envolvente, 2015)

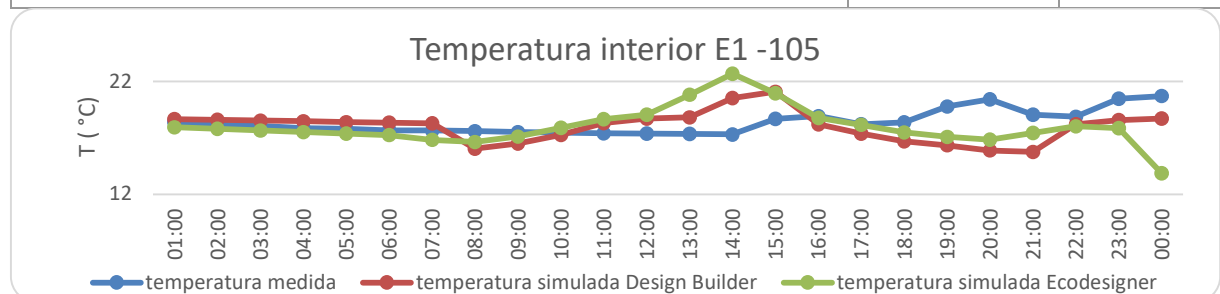
ANEXO 2

Tablas y gráficas de las simulaciones previa a la calibración.

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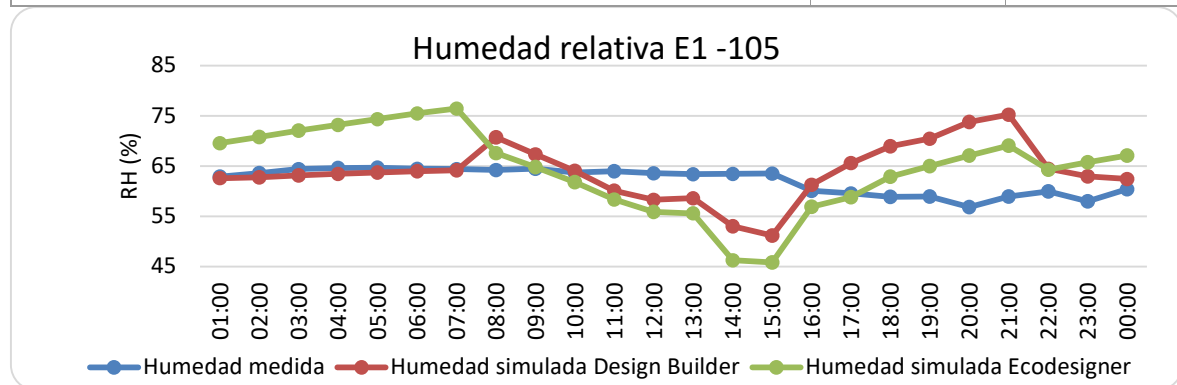
Temperatura

fecha	Hora	Temperatura medida	Temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	18.41	18.66374	17.95	0.25	0.46
20/4/2022	02:00	18.18	18.61575	17.80	0.44	0.37
20/4/2022	03:00	18.05	18.53657	17.66	0.48	0.39
20/4/2022	04:00	17.87	18.46869	17.52	0.60	0.35
20/4/2022	05:00	17.81	18.39957	17.38	0.59	0.43
20/4/2022	06:00	17.68	18.33539	17.25	0.66	0.43
20/4/2022	07:00	17.64	18.30214	16.82	0.66	0.82
20/4/2022	08:00	17.59	16.04821	16.64	1.54	0.95
20/4/2022	09:00	17.52	16.51478	17.13	1.00	0.39
20/4/2022	10:00	17.47	17.28829	17.90	0.18	0.43
20/4/2022	11:00	17.42	18.32293	18.67	0.91	1.25
20/4/2022	12:00	17.39	18.71536	19.07	1.32	1.68
20/4/2022	13:00	17.36	18.82684	20.82	1.47	3.46
20/4/2022	14:00	17.32	20.53341	22.69	3.22	5.37
20/4/2022	15:00	18.70	21.0967	20.96	2.40	2.26
20/4/2022	16:00	18.93	18.21706	18.78	0.71	0.14
20/4/2022	17:00	18.22	17.39289	18.15	0.83	0.07
20/4/2022	18:00	18.37	16.68403	17.49	1.69	0.88
20/4/2022	19:00	19.78	16.34215	17.09	3.44	2.69
20/4/2022	20:00	20.42	15.90245	16.85	4.52	3.57
20/4/2022	21:00	19.06	15.76984	17.44	3.29	1.62
20/4/2022	22:00	18.88	18.22493	18.04	0.65	0.84
20/4/2022	23:00	20.49	18.59194	17.86	1.90	2.62
21/4/2022	00:00	20.72	18.72195	13.86	1.99	6.86
PROMEDIO					1.45	1.60



Humedad

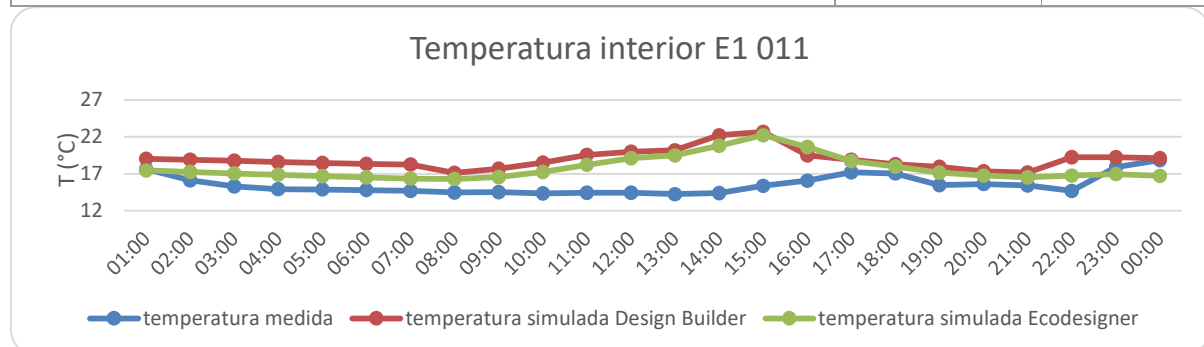
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			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	63	62.60868	69.53	0.27	6.66
20/4/2022	02:00	64	62.80366	70.83	0.81	7.21
20/4/2022	03:00	64	63.13311	72.06	1.27	7.66
20/4/2022	04:00	65	63.41909	73.21	1.23	8.56
20/4/2022	05:00	65	63.71129	74.36	0.97	9.67
20/4/2022	06:00	64	63.98571	75.48	0.44	11.05
20/4/2022	07:00	64	64.13637	76.47	0.24	12.10
20/4/2022	08:00	64	70.77231	67.58	6.58	3.39
20/4/2022	09:00	64	67.34389	64.82	2.90	0.38
20/4/2022	10:00	64	64.0466	61.83	0.30	1.92
20/4/2022	11:00	64	60.08684	58.37	3.91	5.63
20/4/2022	12:00	64	58.30391	55.89	5.28	7.70
20/4/2022	13:00	63	58.58275	55.56	4.82	7.84
20/4/2022	14:00	63	52.98693	46.24	10.44	17.19
20/4/2022	15:00	63	51.1489	45.81	12.32	17.66
20/4/2022	16:00	60	61.30221	56.92	1.23	3.15
20/4/2022	17:00	60	65.58225	58.80	6.07	0.71
20/4/2022	18:00	59	68.94701	62.89	10.06	4.00
20/4/2022	19:00	59	70.44081	64.98	11.48	6.03
20/4/2022	20:00	57	73.80604	67.08	16.99	10.26
20/4/2022	21:00	59	75.22842	69.05	16.30	10.12
20/4/2022	22:00	60	64.45824	64.29	4.49	4.32
20/4/2022	23:00	58	62.92798	65.76	4.96	7.80
21/4/2022	00:00	60	62.40185	67.09	2.01	6.69
PROMEDIO					5.22	7.40



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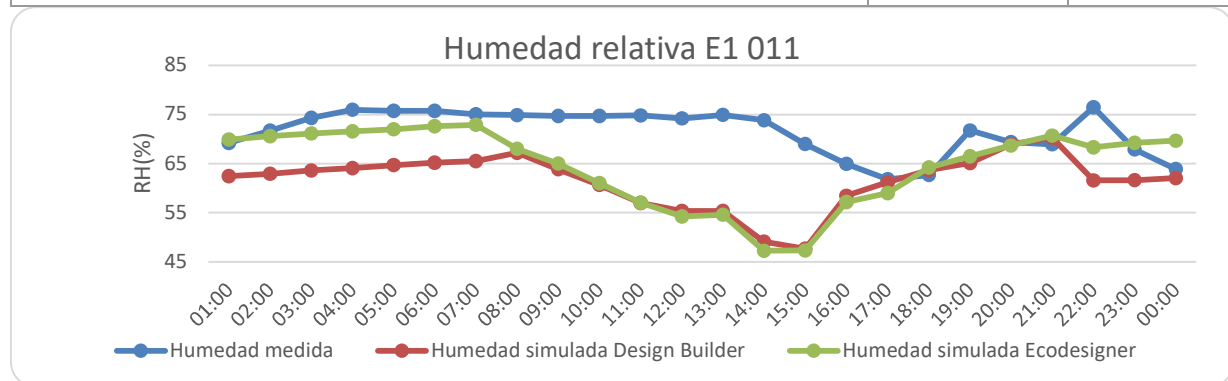
Temperatura

fecha	Hora	Temperatura medida	temperatura simulada		Diferencia	
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20/4/2022	01:00	17.63	19.01195	17.45	1.38	0.18
20/4/2022	02:00	16.08	18.89055	17.24	2.81	1.15
20/4/2022	03:00	15.29	18.72569	17.05	3.44	1.76
20/4/2022	04:00	14.91	18.5998	16.86	3.69	1.95
20/4/2022	05:00	14.85	18.45813	16.67	3.61	1.83
20/4/2022	06:00	14.77	18.33549	16.48	3.56	1.71
20/4/2022	07:00	14.66	18.26923	16.33	3.61	1.67
20/4/2022	08:00	14.44	17.11779	16.27	2.67	1.83
20/4/2022	09:00	14.48	17.67061	16.52	3.19	2.04
20/4/2022	10:00	14.31	18.4892	17.21	4.18	2.90
20/4/2022	11:00	14.39	19.55077	18.20	5.16	3.80
20/4/2022	12:00	14.42	19.98589	19.10	5.56	4.68
20/4/2022	13:00	14.23	20.18628	19.46	5.96	5.24
20/4/2022	14:00	14.36	22.22606	20.78	7.87	6.42
20/4/2022	15:00	15.34	22.68445	22.22	7.34	6.87
20/4/2022	16:00	16.05	19.48758	20.64	3.44	4.59
20/4/2022	17:00	17.21	18.91025	18.72	1.70	1.51
20/4/2022	18:00	17.04	18.307	17.96	1.27	0.93
20/4/2022	19:00	15.45	17.92455	17.15	2.48	1.71
20/4/2022	20:00	15.58	17.29502	16.74	1.72	1.16
20/4/2022	21:00	15.39	17.13882	16.49	1.75	1.10
20/4/2022	22:00	14.67	19.24778	16.73	4.58	2.06
20/4/2022	23:00	17.90	19.21922	16.94	1.32	0.96
21/4/2022	00:00	18.84	19.11628	16.69	0.28	2.15
PROMEDIO					3.44	2.51



Humedad

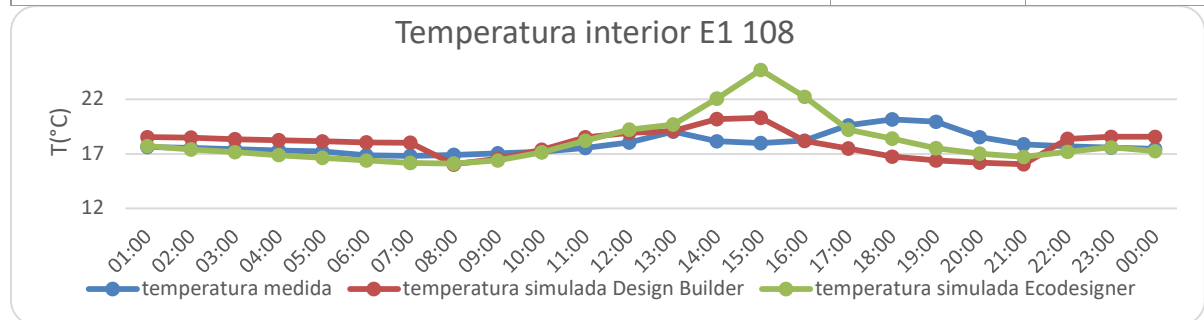
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			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	69.21	62.42171	69.90	6.78	0.69
20/4/2022	02:00	71.65	62.90355	70.58	8.75	1.07
20/4/2022	03:00	74.32	63.57259	71.11	10.74	3.20
20/4/2022	04:00	75.93	64.09235	71.52	11.84	4.41
20/4/2022	05:00	75.70	64.68092	72.00	11.02	3.70
20/4/2022	06:00	75.69	65.19794	72.57	10.49	3.12
20/4/2022	07:00	75.06	65.48698	72.87	9.57	2.19
20/4/2022	08:00	74.84	67.19123	67.98	7.65	6.86
20/4/2022	09:00	74.65	63.84753	65.01	10.80	9.64
20/4/2022	10:00	74.68	60.67028	60.99	14.01	13.69
20/4/2022	11:00	74.82	56.99987	57.04	17.82	17.78
20/4/2022	12:00	74.19	55.31199	54.20	18.88	20.00
20/4/2022	13:00	74.91	55.29614	54.56	19.61	20.35
20/4/2022	14:00	73.79	49.05346	47.25	24.73	26.54
20/4/2022	15:00	68.95	47.68528	47.30	21.26	21.65
20/4/2022	16:00	64.93	58.42384	57.13	6.50	7.80
20/4/2022	17:00	61.81	61.17696	59.02	0.63	2.79
20/4/2022	18:00	62.70	63.67414	64.18	0.98	1.48
20/4/2022	19:00	71.74	65.13383	66.47	6.61	5.28
20/4/2022	20:00	69.33	68.92827	68.67	0.40	0.66
20/4/2022	21:00	68.90	70.25568	70.71	1.36	1.81
20/4/2022	22:00	76.43	61.58609	68.32	14.85	8.11
20/4/2022	23:00	67.90	61.65456	69.19	6.25	1.29
21/4/2022	00:00	63.89	62.03672	69.66	1.85	5.77
PROMEDIO					10.14	7.91



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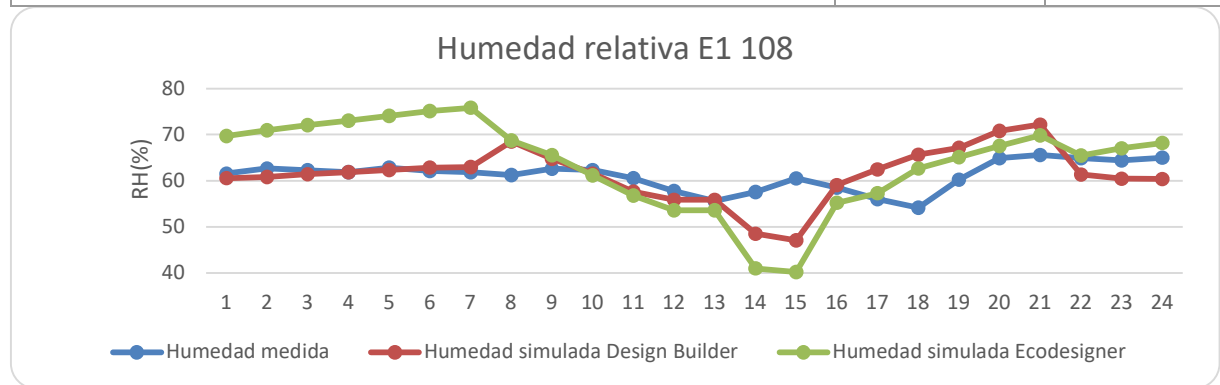
Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	17.633004	18.52739	17.70	0.89	0.07
20/4/2022	02:00	17.540443	18.47233	17.41	0.93	0.13
20/4/2022	03:00	17.417259	18.34385	17.14	0.93	0.28
20/4/2022	04:00	17.317361	18.24876	16.88	0.93	0.43
20/4/2022	05:00	17.217667	18.13709	16.63	0.92	0.59
20/4/2022	06:00	16.881593	18.0318	16.38	1.15	0.50
20/4/2022	07:00	16.820701	18.00221	16.17	1.18	0.65
20/4/2022	08:00	16.904430	16.03602	16.11	0.87	0.80
20/4/2022	09:00	17.049363	16.53732	16.38	0.51	0.66
20/4/2022	10:00	17.171735	17.38365	17.13	0.21	0.05
20/4/2022	11:00	17.532892	18.49392	18.21	0.96	0.68
20/4/2022	12:00	18.028983	18.92396	19.23	0.89	1.20
20/4/2022	13:00	19.028718	19.09703	19.70	0.07	0.67
20/4/2022	14:00	18.145518	20.17967	22.08	2.03	3.93
20/4/2022	15:00	17.974037	20.30025	24.70	2.33	6.73
20/4/2022	16:00	18.199784	18.18829	22.24	0.01	4.04
20/4/2022	17:00	19.610943	17.47255	19.23	2.14	0.38
20/4/2022	18:00	20.158049	16.73406	18.39	3.42	1.76
20/4/2022	19:00	19.931306	16.36923	17.50	3.56	2.43
20/4/2022	20:00	18.524832	16.19444	17.02	2.33	1.51
20/4/2022	21:00	17.872980	16.06077	16.71	1.81	1.16
20/4/2022	22:00	17.671657	18.36619	17.18	0.69	0.49
20/4/2022	23:00	17.571281	18.55915	17.60	0.99	0.03
21/4/2022	00:00	17.455709	18.56316	17.24	1.11	0.22
PROMEDIO					1.29	1.22



Humedad

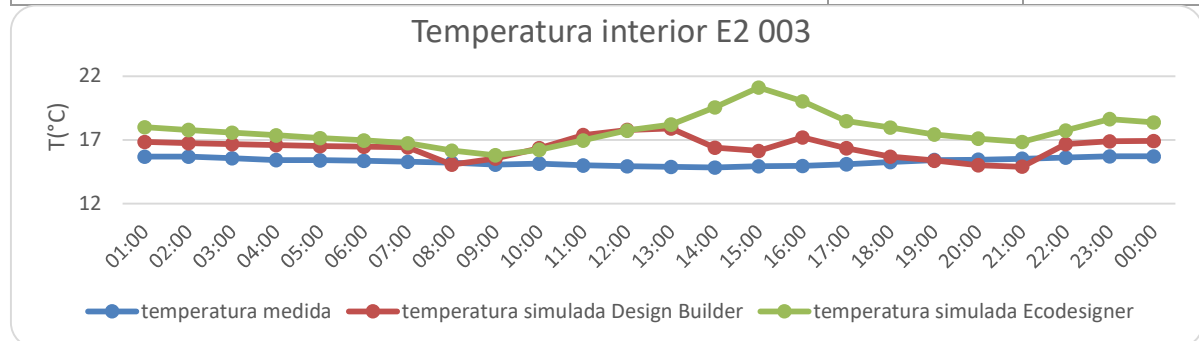
fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	61.543775	60.57763	69.72	0.97	8.18
20/4/2022	02:00	62.630201	60.86009	70.97	1.77	8.34
20/4/2022	03:00	62.272128	61.43246	72.08	0.84	9.81
20/4/2022	04:00	61.897779	61.86126	73.06	0.04	11.16
20/4/2022	05:00	62.853996	62.36309	74.07	0.49	11.22
20/4/2022	06:00	62.109368	62.83892	75.12	0.73	13.01
20/4/2022	07:00	61.897779	63.01875	75.83	1.12	13.94
20/4/2022	08:00	61.254875	68.5228	68.75	7.27	7.50
20/4/2022	09:00	62.585442	64.76135	65.55	2.18	2.96
20/4/2022	10:00	62.316887	61.52072	61.19	0.80	1.13
20/4/2022	11:00	60.542798	57.64192	56.76	2.90	3.78
20/4/2022	12:00	57.784009	55.85783	53.60	1.93	4.18
20/4/2022	13:00	55.639643	55.87602	53.62	0.24	2.02
20/4/2022	14:00	57.548007	48.52529	41.00	9.02	16.55
20/4/2022	15:00	60.514315	47.06514	40.22	13.45	20.29
20/4/2022	16:00	58.573397	59.05596	55.23	0.48	3.34
20/4/2022	17:00	56.009923	62.47872	57.29	6.47	1.28
20/4/2022	18:00	54.187007	65.65516	62.63	11.47	8.45
20/4/2022	19:00	60.241692	67.1392	65.14	6.90	4.90
20/4/2022	20:00	64.877922	70.79652	67.57	5.92	2.69
20/4/2022	21:00	65.576164	72.17657	69.84	6.60	4.26
20/4/2022	22:00	64.884433	61.36807	65.43	3.52	0.55
20/4/2022	23:00	64.449048	60.4587	67.02	3.99	2.57
21/4/2022	00:00	64.978020	60.41065	68.23	4.57	3.25
PROMEDIO					3.90	6.89



AULA E2 003

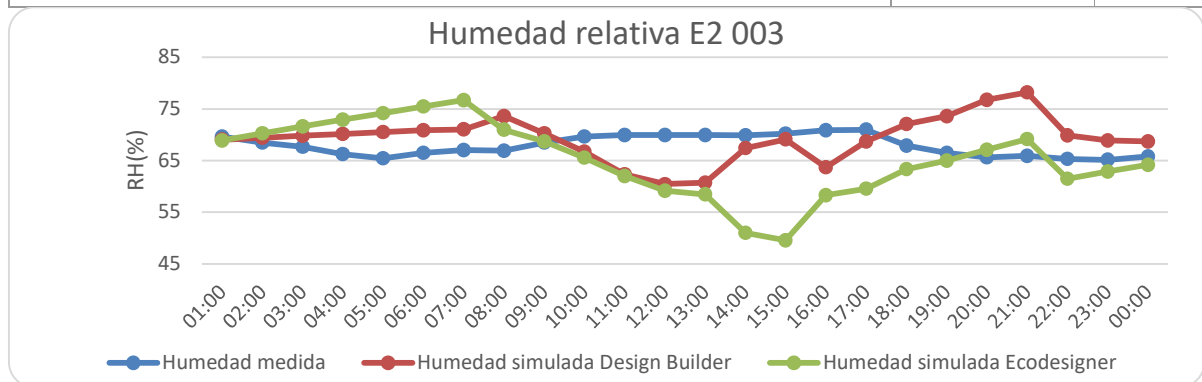
Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	15.676375	16.83492	18.00	1.16	2.33
20/4/2022	02:00	15.676375	16.75988	17.79	1.08	2.11
20/4/2022	03:00	15.557248	16.67274	17.58	1.12	2.02
20/4/2022	04:00	15.416084	16.59624	17.37	1.18	1.95
20/4/2022	05:00	15.408672	16.52235	17.16	1.11	1.75
20/4/2022	06:00	15.356754	16.45503	16.95	1.10	1.60
20/4/2022	07:00	15.282673	16.41272	16.76	1.13	1.47
20/4/2022	08:00	15.216082	15.08244	16.17	0.13	0.95
20/4/2022	09:00	15.083146	15.55288	15.80	0.47	0.71
20/4/2022	10:00	15.134892	16.33875	16.22	1.20	1.09
20/4/2022	11:00	14.994620	17.39573	16.97	2.40	1.97
20/4/2022	12:00	14.935701	17.78677	17.74	2.85	2.81
20/4/2022	13:00	14.884199	17.9086	18.21	3.02	3.33
20/4/2022	14:00	14.847444	16.40352	19.56	1.56	4.72
20/4/2022	15:00	14.935706	16.13691	21.12	1.20	6.18
20/4/2022	16:00	14.957800	17.18949	20.04	2.23	5.08
20/4/2022	17:00	15.097888	16.35602	18.48	1.26	3.38
20/4/2022	18:00	15.253075	15.68816	17.99	0.44	2.73
20/4/2022	19:00	15.423619	15.37458	17.43	0.05	2.00
20/4/2022	20:00	15.460628	15.01322	17.09	0.45	1.63
20/4/2022	21:00	15.527516	14.89566	16.84	0.63	1.31
20/4/2022	22:00	15.616775	16.67831	17.74	1.06	2.12
20/4/2022	23:00	15.698741	16.89002	18.63	1.19	2.93
21/4/2022	00:00	15.721118	16.92241	18.38	1.20	2.66
PROMEDIO					1.22	2.45



Humedad

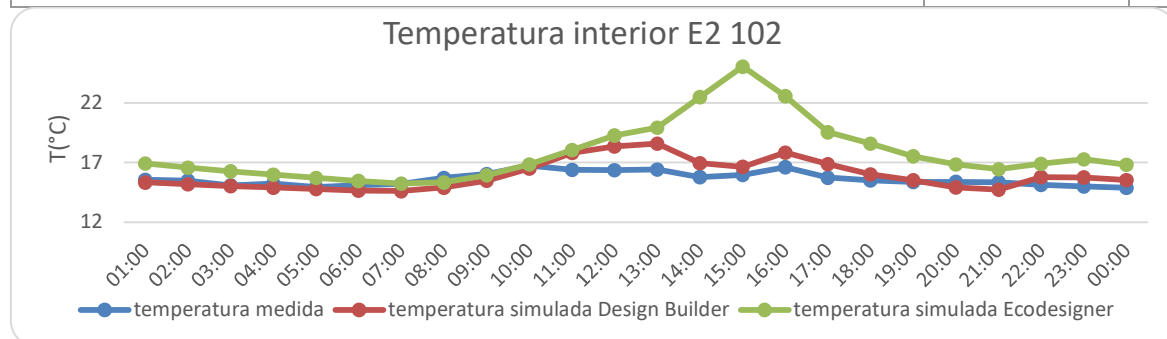
fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	69.628899	69.06512	68.90	0.56	0.73
20/4/2022	02:00	68.469231	69.40237	70.27	0.93	1.80
20/4/2022	03:00	67.626945	69.80673	71.60	2.18	3.97
20/4/2022	04:00	66.227206	70.16576	72.90	3.94	6.67
20/4/2022	05:00	65.429680	70.51494	74.19	5.09	8.76
20/4/2022	06:00	66.467278	70.83702	75.48	4.37	9.01
20/4/2022	07:00	67.004387	71.04698	76.70	4.04	9.69
20/4/2022	08:00	66.870110	73.58597	70.95	6.72	4.08
20/4/2022	09:00	68.473300	70.2797	68.68	1.81	0.20
20/4/2022	10:00	69.657382	66.69133	65.56	2.97	4.10
20/4/2022	11:00	69.934075	62.375	61.97	7.56	7.96
20/4/2022	12:00	69.913729	60.43993	59.13	9.47	10.78
20/4/2022	13:00	69.913729	60.69568	58.43	9.22	11.48
20/4/2022	14:00	69.893384	67.42786	51.00	2.47	18.90
20/4/2022	15:00	70.222974	69.09302	49.54	1.13	20.69
20/4/2022	16:00	70.857740	63.67798	58.29	7.18	12.57
20/4/2022	17:00	70.967603	68.67953	59.56	2.29	11.40
20/4/2022	18:00	67.867017	72.08532	63.35	4.22	4.52
20/4/2022	19:00	66.487623	73.56632	64.98	7.08	1.51
20/4/2022	20:00	65.616854	76.76064	67.05	11.14	1.43
20/4/2022	21:00	65.930168	78.21967	69.15	12.29	3.22
20/4/2022	22:00	65.315748	69.84184	61.47	4.53	3.84
20/4/2022	23:00	65.132642	68.86452	62.86	3.73	2.27
21/4/2022	00:00	65.759270	68.70605	64.18	2.95	1.57
PROMEDIO					4.91	6.72



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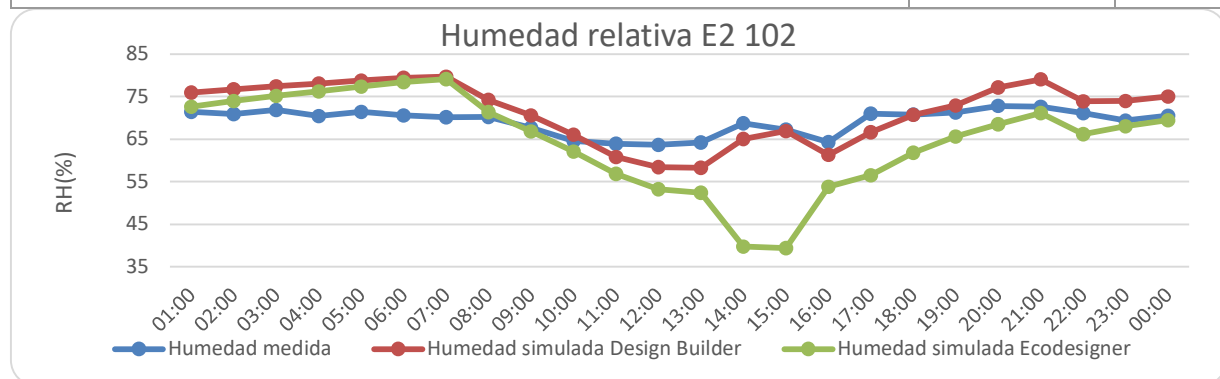
Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	15.58	15.34266	16.92	0.24	1.34
20/4/2022	02:00	15.50	15.1959	16.58	0.30	1.08
20/4/2022	03:00	15.08	15.04809	16.28	0.04	1.20
20/4/2022	04:00	15.24	14.92107	16.00	0.32	0.76
20/4/2022	05:00	14.97	14.79198	15.72	0.17	0.76
20/4/2022	06:00	15.11	14.6702	15.46	0.44	0.35
20/4/2022	07:00	15.22	14.61984	15.25	0.60	0.03
20/4/2022	08:00	15.71	14.92323	15.35	0.79	0.37
20/4/2022	09:00	16.04	15.49791	15.94	0.54	0.10
20/4/2022	10:00	16.75	16.50563	16.86	0.24	0.12
20/4/2022	11:00	16.39	17.81486	18.08	1.43	1.69
20/4/2022	12:00	16.37	18.36631	19.27	2.00	2.90
20/4/2022	13:00	16.42	18.59663	19.93	2.18	3.51
20/4/2022	14:00	15.80	16.96193	22.50	1.17	6.70
20/4/2022	15:00	15.98	16.65153	25.06	0.67	9.08
20/4/2022	16:00	16.63	17.82689	22.57	1.20	5.94
20/4/2022	17:00	15.75	16.8731	19.55	1.12	3.80
20/4/2022	18:00	15.52	16.01567	18.61	0.50	3.09
20/4/2022	19:00	15.39	15.52005	17.54	0.13	2.16
20/4/2022	20:00	15.39	14.94675	16.84	0.44	1.46
20/4/2022	21:00	15.36	14.72405	16.45	0.64	1.08
20/4/2022	22:00	15.14	15.78428	16.91	0.65	1.77
20/4/2022	23:00	15.00	15.76135	17.29	0.76	2.29
21/4/2022	00:00	14.90	15.54158	16.83	0.64	1.93
PROMEDIO					0.72	2.23



Humedad

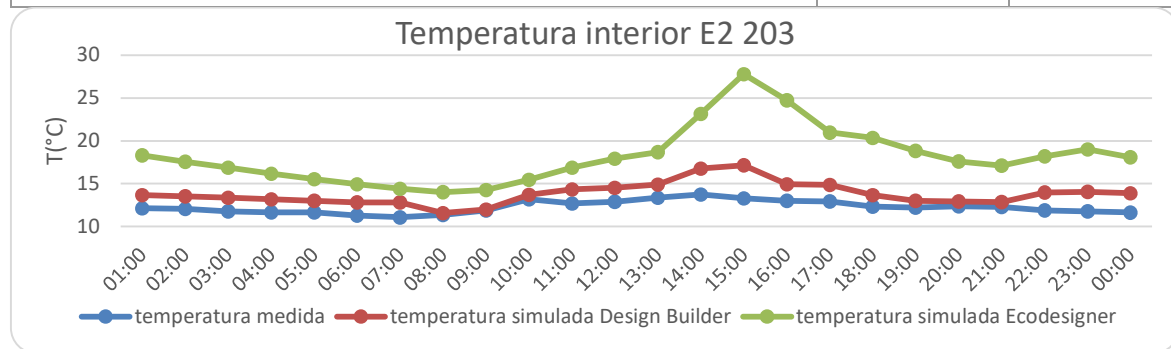
fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	71.423332	75.97066	72.63	4.55	1.21
20/4/2022	02:00	70.906568	76.69874	73.99	5.79	3.08
20/4/2022	03:00	71.818026	77.45271	75.21	5.63	3.39
20/4/2022	04:00	70.442701	78.10969	76.25	7.67	5.81
20/4/2022	05:00	71.435539	78.78329	77.34	7.35	5.91
20/4/2022	06:00	70.548495	79.42648	78.46	8.88	7.91
20/4/2022	07:00	70.149732	79.70632	79.14	9.56	8.99
20/4/2022	08:00	70.259595	74.24754	71.38	3.99	1.12
20/4/2022	09:00	67.663567	70.54558	66.81	2.88	0.85
20/4/2022	10:00	64.567050	66.03672	62.08	1.47	2.49
20/4/2022	11:00	63.960767	60.84871	56.88	3.11	7.08
20/4/2022	12:00	63.675936	58.42562	53.26	5.25	10.41
20/4/2022	13:00	64.180494	58.29271	52.41	5.89	11.77
20/4/2022	14:00	68.774406	65.09083	39.72	3.68	29.06
20/4/2022	15:00	67.252597	66.86782	39.37	0.38	27.88
20/4/2022	16:00	64.270012	61.28663	53.85	2.98	10.42
20/4/2022	17:00	71.008293	66.60956	56.49	4.40	14.52
20/4/2022	18:00	70.808912	70.69006	61.82	0.12	8.99
20/4/2022	19:00	71.297193	72.9444	65.66	1.65	5.64
20/4/2022	20:00	72.823072	77.1236	68.55	4.30	4.28
20/4/2022	21:00	72.611483	79.09387	71.17	6.48	1.44
20/4/2022	22:00	71.138501	73.92336	66.22	2.78	4.92
20/4/2022	23:00	69.384758	74.00121	68.04	4.62	1.35
21/4/2022	00:00	70.491529	75.03298	69.42	4.54	1.07
PROMEDIO					4.50	7.48



AULA E2 203

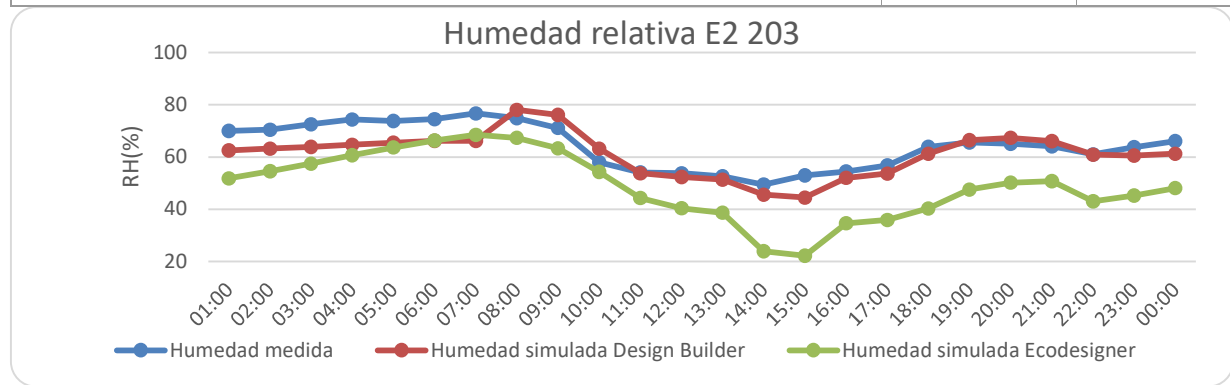
Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
26/6/2022	01:00	12.141410	13.68959	18.32	1.55	6.17
26/6/2022	02:00	12.056783	13.54857	17.57	1.49	5.51
26/6/2022	03:00	11.768716	13.36763	16.86	1.60	5.09
26/6/2022	04:00	11.670349	13.18311	16.17	1.51	4.50
26/6/2022	05:00	11.656129	12.999	15.52	1.34	3.86
26/6/2022	06:00	11.299603	12.81998	14.93	1.52	3.63
26/6/2022	07:00	11.083640	12.83781	14.41	1.75	3.33
26/6/2022	08:00	11.348464	11.56445	14.02	0.22	2.67
26/6/2022	09:00	11.895578	11.98257	14.29	0.09	2.39
26/6/2022	10:00	13.193929	13.69822	15.46	0.50	2.26
26/6/2022	11:00	12.701296	14.32788	16.89	1.63	4.18
26/6/2022	12:00	12.901174	14.53677	17.93	1.64	5.03
26/6/2022	13:00	13.358864	14.92301	18.72	1.56	5.36
26/6/2022	14:00	13.754756	16.7795	23.17	3.02	9.41
26/6/2022	15:00	13.279607	17.1494	27.81	3.87	14.53
26/6/2022	16:00	13.014654	14.9282	24.75	1.91	11.73
26/6/2022	17:00	12.943722	14.86242	20.98	1.92	8.03
26/6/2022	18:00	12.353732	13.67263	20.34	1.32	7.99
26/6/2022	19:00	12.226292	12.99551	18.84	0.77	6.61
26/6/2022	20:00	12.388812	12.95175	17.60	0.56	5.21
26/6/2022	21:00	12.311283	12.86425	17.13	0.55	4.81
26/6/2022	22:00	11.873865	13.9985	18.20	2.12	6.33
26/6/2022	23:00	11.789630	14.05849	19.03	2.27	7.24
27/6/2022	00:00	11.635302	13.88995	18.11	2.25	6.48
PROMEDIO					1.54	5.93



Humedad

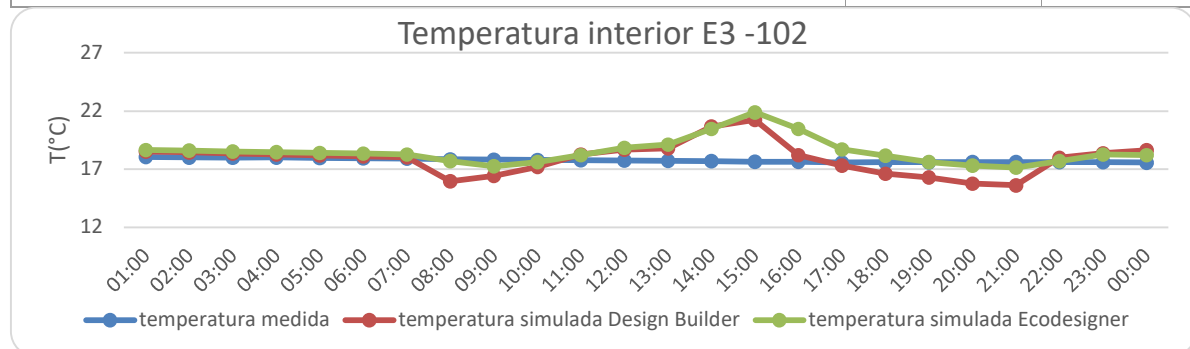
fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
26/6/2022	01:00	70.027662	62.51265	51.80	7.52	18.23
26/6/2022	02:00	70.471184	63.2386	54.58	7.23	15.89
26/6/2022	03:00	72.534172	63.9784	57.47	8.56	15.06
26/6/2022	04:00	74.426262	64.74334	60.67	9.68	13.76
26/6/2022	05:00	73.783358	65.51652	63.67	8.27	10.11
26/6/2022	06:00	74.495435	66.27824	66.30	8.22	8.19
26/6/2022	07:00	76.704908	66.19254	68.56	10.51	8.15
26/6/2022	08:00	74.829094	78.07098	67.36	3.24	7.47
26/6/2022	09:00	71.240227	76.12843	63.35	4.89	7.89
26/6/2022	10:00	58.109532	63.19542	54.32	5.09	3.79
26/6/2022	11:00	54.101559	53.77914	44.35	0.32	9.76
26/6/2022	12:00	53.763831	52.36504	40.39	1.40	13.37
26/6/2022	13:00	52.632646	51.39004	38.75	1.24	13.88
26/6/2022	14:00	49.491370	45.60713	23.93	3.88	25.56
26/6/2022	15:00	52.954098	44.49508	22.25	8.46	30.70
26/6/2022	16:00	54.536943	52.07154	34.69	2.47	19.85
26/6/2022	17:00	56.811518	53.71567	35.96	3.10	20.85
26/6/2022	18:00	63.891594	61.2425	40.31	2.65	23.58
26/6/2022	19:00	65.645337	66.4739	47.63	0.83	18.01
26/6/2022	20:00	65.100090	67.39082	50.19	2.29	14.91
26/6/2022	21:00	64.139804	66.16982	50.76	2.03	13.38
26/6/2022	22:00	61.092115	60.94778	43.14	0.14	17.95
26/6/2022	23:00	63.806145	60.63708	45.30	3.17	18.51
27/6/2022	00:00	66.149895	61.25444	48.15	4.90	18.00
PROMEDIO					4.59	15.29



AULA E3 -102

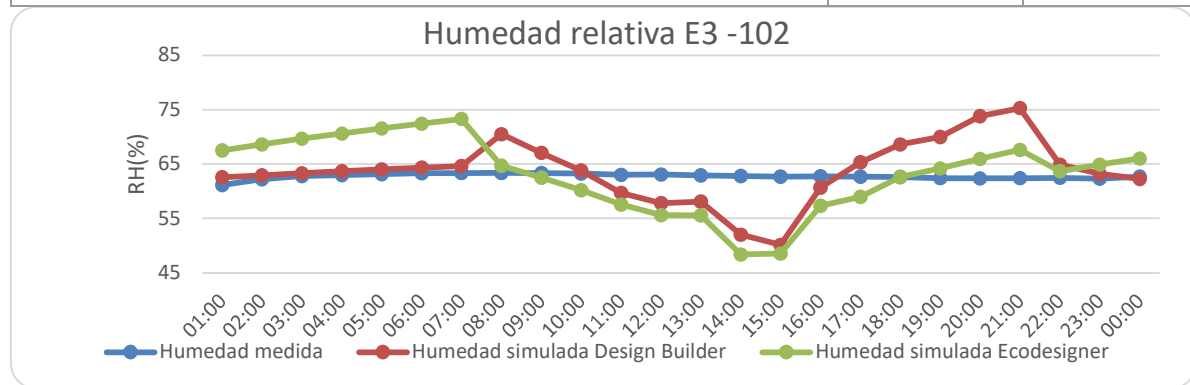
Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	18.05166533	18.53274	18.67	0.48	0.62
20/4/2022	02:00	17.99719367	18.44564	18.60	0.45	0.60
20/4/2022	03:00	17.98164433	18.35622	18.54	0.37	0.56
20/4/2022	04:00	17.99719367	18.2673	18.47	0.27	0.47
20/4/2022	05:00	17.966102	18.18695	18.40	0.22	0.44
20/4/2022	06:00	17.942792	18.11112	18.34	0.17	0.39
20/4/2022	07:00	17.896207	18.04744	18.27	0.15	0.37
20/4/2022	08:00	17.86517133	15.95839	17.70	1.91	0.17
20/4/2022	09:00	17.818656	16.44015	17.27	1.38	0.55
20/4/2022	10:00	17.795415	17.1955	17.62	0.60	0.17
20/4/2022	11:00	17.76444067	18.26698	18.23	0.50	0.46
20/4/2022	12:00	17.74122733	18.67584	18.83	0.93	1.08
20/4/2022	13:00	17.72575417	18.796	19.11	1.07	1.39
20/4/2022	14:00	17.694815	20.65977	20.46	2.96	2.77
20/4/2022	15:00	17.65617667	21.24979	21.90	3.59	4.24
20/4/2022	16:00	17.64073733	18.21234	20.47	0.57	2.83
20/4/2022	17:00	17.57898	17.30375	18.71	0.28	1.13
20/4/2022	18:00	17.594426	16.61279	18.16	0.98	0.56
20/4/2022	19:00	17.594426	16.29793	17.61	1.30	0.02
20/4/2022	20:00	17.62528467	15.75971	17.32	1.87	0.31
20/4/2022	21:00	17.617565	15.61805	17.15	2.00	0.47
20/4/2022	22:00	17.617565	17.97766	17.70	0.36	0.08
20/4/2022	23:00	17.62528467	18.38029	18.28	0.76	0.65
21/4/2022	00:00	17.57898	18.61725	18.21	1.04	0.63
PROMEDIO					1.01	0.87



Humedad

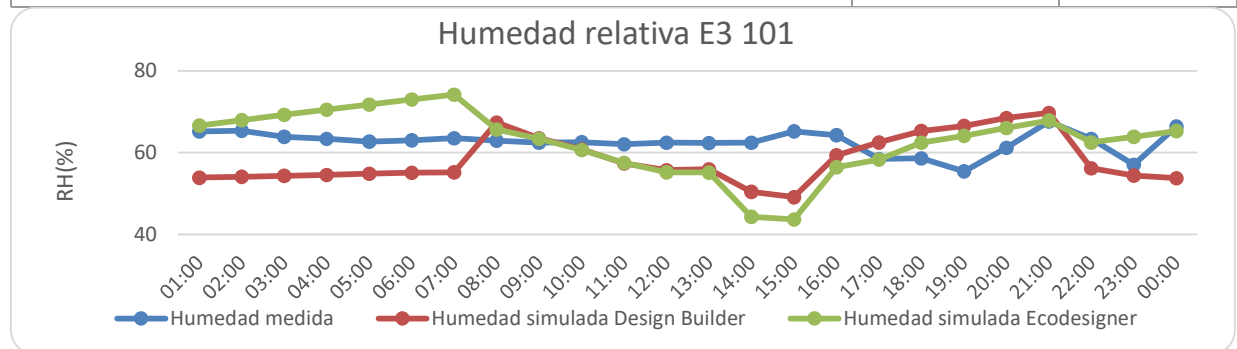
fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	61.16942567	62.5816	67.54	1.41	6.37
20/4/2022	02:00	62.1948165	62.93075	68.63	0.74	6.43
20/4/2022	03:00	62.784823	63.30193	69.65	0.52	6.87
20/4/2022	04:00	62.99641183	63.67307	70.62	0.68	7.62
20/4/2022	05:00	63.122551	64.01199	71.55	0.89	8.43
20/4/2022	06:00	63.30158717	64.33525	72.47	1.03	9.16
20/4/2022	07:00	63.3544845	64.61052	73.31	1.26	9.95
20/4/2022	08:00	63.39110567	70.49162	64.71	7.10	1.32
20/4/2022	09:00	63.38296767	67.08743	62.54	3.70	0.84
20/4/2022	10:00	63.27310417	63.80575	60.21	0.53	3.07
20/4/2022	11:00	63.05337783	59.69889	57.55	3.35	5.50
20/4/2022	12:00	63.073723	57.84081	55.61	5.23	7.46
20/4/2022	13:00	62.91910033	58.09101	55.55	4.83	7.36
20/4/2022	14:00	62.805168	52.04367	48.39	10.76	14.41
20/4/2022	15:00	62.67496	50.14641	48.54	12.53	14.14
20/4/2022	16:00	62.772616	60.68641	57.32	2.09	5.46
20/4/2022	17:00	62.70751183	65.3773	58.97	2.67	3.74
20/4/2022	18:00	62.63833867	68.6321	62.66	5.99	0.02
20/4/2022	19:00	62.42268117	70.01826	64.22	7.60	1.80
20/4/2022	20:00	62.373853	73.83508	65.97	11.46	3.60
20/4/2022	21:00	62.406405	75.30871	67.62	12.90	5.21
20/4/2022	22:00	62.487785	64.90353	63.67	2.42	1.19
20/4/2022	23:00	62.32502483	63.22072	64.90	0.90	2.58
21/4/2022	00:00	62.68716667	62.2719	66.01	0.42	3.32
PROMEDIO					4.21	5.66



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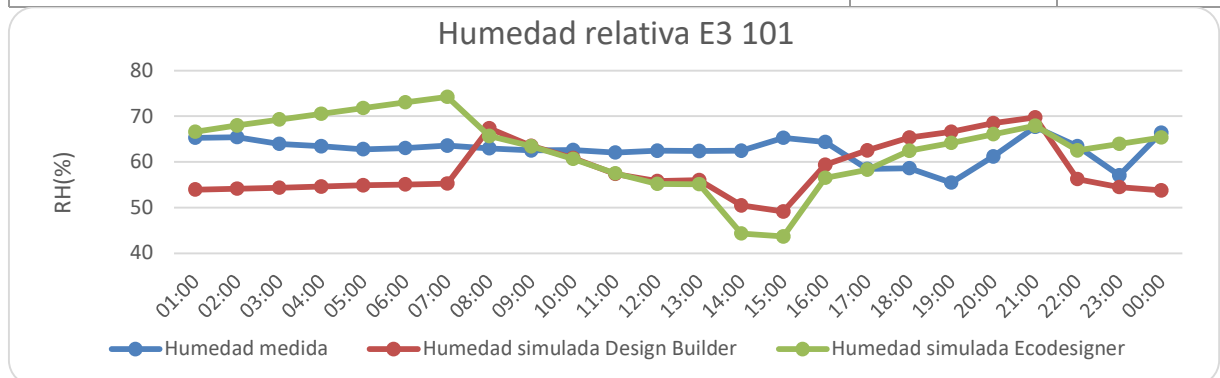
Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	17.541520	21.1961	18.94	3.65	1.40
20/4/2022	02:00	17.973884	21.14445	18.83	3.17	0.85
20/4/2022	03:00	18.004989	21.07377	18.71	3.07	0.71
20/4/2022	04:00	17.911735	21.00874	18.59	3.10	0.68
20/4/2022	05:00	17.803210	20.942	18.48	3.14	0.67
20/4/2022	06:00	17.509659	20.8776	18.36	3.37	0.85
20/4/2022	07:00	17.455709	20.83004	18.24	3.37	0.78
20/4/2022	08:00	17.440351	16.99355	17.55	0.45	0.11
20/4/2022	09:00	17.363464	17.56075	17.04	0.20	0.32
20/4/2022	10:00	17.057042	18.22821	17.45	1.17	0.39
20/4/2022	11:00	17.095242	19.20783	18.17	2.11	1.08
20/4/2022	12:00	16.912128	19.57431	18.89	2.66	1.98
20/4/2022	13:00	16.896841	19.71235	19.23	2.82	2.33
20/4/2022	14:00	16.835956	21.48944	21.23	4.65	4.39
20/4/2022	15:00	16.151060	21.90582	23.46	5.75	7.30
20/4/2022	16:00	17.268354	18.89019	21.44	1.62	4.17
20/4/2022	17:00	19.138022	18.30737	18.91	0.83	0.23
20/4/2022	18:00	18.027295	17.66012	18.27	0.37	0.24
20/4/2022	19:00	19.296874	17.35188	17.64	1.94	1.66
20/4/2022	20:00	17.088123	17.20444	17.31	0.12	0.22
20/4/2022	21:00	16.254265	17.08571	17.10	0.83	0.84
20/4/2022	22:00	17.593412	20.5545	17.80	2.96	0.21
20/4/2022	23:00	18.915587	21.05171	18.55	2.14	0.37
21/4/2022	00:00	17.230155	21.25488	18.43	4.02	1.20
PROMEDIO					2.40	1.37



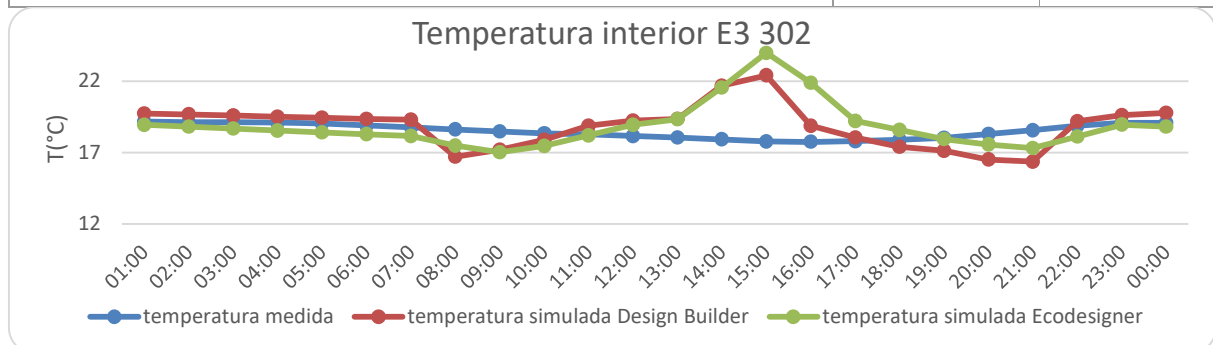
Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	65.291334	53.94884	66.63	11.34	1.34
20/4/2022	02:00	65.405266	54.12587	67.98	11.28	2.57
20/4/2022	03:00	63.964836	54.37616	69.29	9.59	5.32
20/4/2022	04:00	63.419589	54.60842	70.56	8.81	7.14
20/4/2022	05:00	62.756340	54.84734	71.81	7.91	9.06
20/4/2022	06:00	63.061516	55.08005	73.06	7.98	10.00
20/4/2022	07:00	63.557935	55.25613	74.24	8.30	10.68
20/4/2022	08:00	62.951653	67.37822	65.70	4.43	2.75
20/4/2022	09:00	62.491854	63.53519	63.44	1.04	0.95
20/4/2022	10:00	62.577304	60.86713	60.68	1.71	1.90
20/4/2022	11:00	62.084953	57.36213	57.51	4.72	4.57
20/4/2022	12:00	62.455233	55.78913	55.22	6.67	7.23
20/4/2022	13:00	62.406405	55.9856	55.14	6.42	7.27
20/4/2022	14:00	62.443026	50.44365	44.36	12.00	18.08
20/4/2022	15:00	65.279127	49.14636	43.71	16.13	21.57
20/4/2022	16:00	64.335116	59.34015	56.51	4.99	7.83
20/4/2022	17:00	58.512362	62.53709	58.31	4.02	0.20
20/4/2022	18:00	58.618157	65.3563	62.48	6.74	3.86
20/4/2022	19:00	55.476883	66.59852	64.18	11.12	8.70
20/4/2022	20:00	61.181633	68.49543	66.10	7.31	4.92
20/4/2022	21:00	67.667635	69.74432	67.94	2.08	0.27
20/4/2022	22:00	63.456210	56.23961	62.54	7.22	0.92
20/4/2022	23:00	57.076002	54.46203	63.97	2.61	6.89
21/4/2022	00:00	66.418449	53.77205	65.32	12.65	1.10
PROMEDIO					7.38	6.05



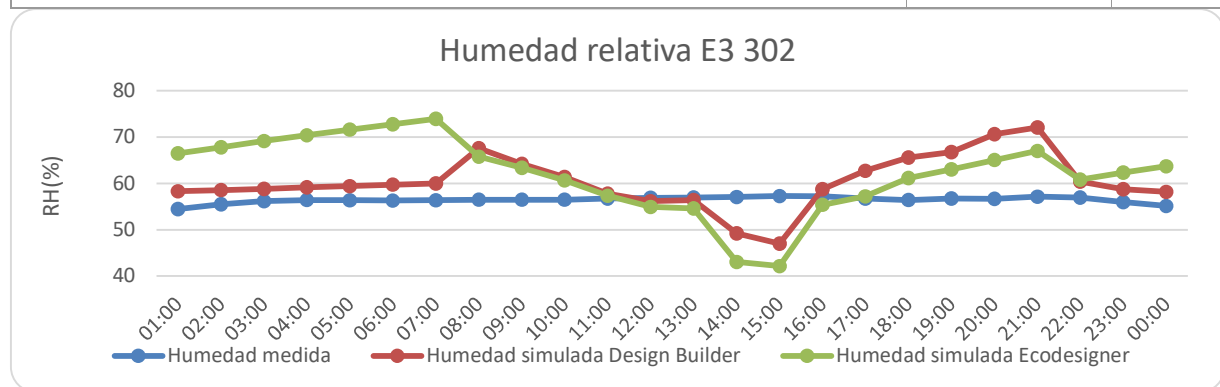
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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	19.18506583	19.74013	18.96	0.56	0.23
20/4/2022	02:00	19.14528267	19.67527	18.82	0.53	0.33
20/4/2022	03:00	19.14528267	19.59745	18.69	0.45	0.46
20/4/2022	04:00	19.12143117	19.52191	18.55	0.40	0.57
20/4/2022	05:00	19.04198017	19.44596	18.42	0.40	0.62
20/4/2022	06:00	18.915209	19.37138	18.28	0.46	0.63
20/4/2022	07:00	18.78863983	19.3056	18.16	0.52	0.63
20/4/2022	08:00	18.6388265	16.71869	17.49	1.92	1.14
20/4/2022	09:00	18.48943317	17.20736	17.03	1.28	1.46
20/4/2022	10:00	18.36396367	17.89454	17.46	0.47	0.90
20/4/2022	11:00	18.30134867	18.87658	18.20	0.58	0.10
20/4/2022	12:00	18.176347	19.24563	18.95	1.07	0.78
20/4/2022	13:00	18.06726367	19.36525	19.35	1.30	1.28
20/4/2022	14:00	17.93503833	21.6903	21.56	3.76	3.62
20/4/2022	15:00	17.78777767	22.41587	24.00	4.63	6.21
20/4/2022	16:00	17.75670767	18.87395	21.89	1.12	4.14
20/4/2022	17:00	17.81866267	18.0546	19.23	0.24	1.41
20/4/2022	18:00	17.896207	17.41791	18.59	0.48	0.70
20/4/2022	19:00	18.04393267	17.12579	17.95	0.92	0.10
20/4/2022	20:00	18.324893	16.52038	17.57	1.80	0.75
20/4/2022	21:00	18.56017033	16.36952	17.33	2.19	1.23
20/4/2022	22:00	18.88360417	19.203	18.13	0.32	0.75
20/4/2022	23:00	19.09758733	19.6269	18.96	0.53	0.13
21/4/2022	00:00	19.09764883	19.78373	18.81	0.69	0.28
PROMEDIO					1.11	1.19



Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	54.46776983	58.3022	66.46	3.83	12.00
20/4/2022	02:00	55.48095317	58.54359	67.82	3.06	12.34
20/4/2022	03:00	56.12792217	58.84334	69.13	2.72	13.00
20/4/2022	04:00	56.44530483	59.13601	70.38	2.69	13.93
20/4/2022	05:00	56.36392483	59.43159	71.61	3.07	15.25
20/4/2022	06:00	56.3069585	59.72431	72.83	3.42	16.52
20/4/2022	07:00	56.38020083	59.98536	73.97	3.61	17.59
20/4/2022	08:00	56.457512	67.58971	65.80	11.13	9.34
20/4/2022	09:00	56.498202	64.21696	63.40	7.72	6.90
20/4/2022	10:00	56.494133	61.38623	60.62	4.89	4.12
20/4/2022	11:00	56.73420433	57.80836	57.33	1.07	0.60
20/4/2022	12:00	56.888827	56.18628	54.94	0.70	1.95
20/4/2022	13:00	56.913241	56.43271	54.59	0.48	2.32
20/4/2022	14:00	57.08413967	49.18372	43.04	7.90	14.04
20/4/2022	15:00	57.263176	47.00575	42.14	10.26	15.12
20/4/2022	16:00	57.21434783	58.73858	55.38	1.52	1.84
20/4/2022	17:00	56.7219975	62.73709	57.18	6.02	0.46
20/4/2022	18:00	56.43716683	65.58067	61.19	9.14	4.75
20/4/2022	19:00	56.7464115	66.78318	63.05	10.04	6.30
20/4/2022	20:00	56.68537633	70.67889	65.06	13.99	8.38
20/4/2022	21:00	57.1248295	72.09674	66.99	14.97	9.87
20/4/2022	22:00	56.958	60.38671	60.85	3.43	3.89
20/4/2022	23:00	55.9326115	58.74662	62.32	2.81	6.38
21/4/2022	00:00	55.12694883	58.16189	63.68	3.03	8.55
PROMEDIO					5.48	8.56



ANEXO 3

Tablas de las simulaciones después de calibración.

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Temperatura

fecha	Hora	Temperatura medida	Temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	18.41	18.25217	18.62	0.16	0.21
20/4/2022	02:00	18.18	18.1869	18.45	0.01	0.28
20/4/2022	03:00	18.05	18.10122	18.29	0.05	0.24
20/4/2022	04:00	17.87	18.03223	18.13	0.16	0.26
20/4/2022	05:00	17.81	17.96309	17.97	0.15	0.16
20/4/2022	06:00	17.68	17.89929	17.81	0.22	0.14
20/4/2022	07:00	17.64	17.86667	17.67	0.23	0.03
20/4/2022	08:00	17.59	16.72327	16.33	0.86	1.25
20/4/2022	09:00	17.52	15.9082	15.99	1.61	1.53
20/4/2022	10:00	17.47	16.75659	17.22	0.71	0.25
20/4/2022	11:00	17.42	17.82581	17.99	0.41	0.57
20/4/2022	12:00	17.39	18.21488	18.75	0.82	1.36
20/4/2022	13:00	17.36	17.09062	18.35	0.27	1.00
20/4/2022	14:00	17.32	17.56006	18.28	0.24	0.96
20/4/2022	15:00	18.70	17.29212	18.72	1.41	0.02
20/4/2022	16:00	18.93	17.50523	18.61	1.42	0.32
20/4/2022	17:00	18.22	16.63624	18.46	1.59	0.24
20/4/2022	18:00	18.37	20.23451	19.86	1.86	1.49
20/4/2022	19:00	19.78	20.72441	21.41	0.94	1.63
20/4/2022	20:00	20.42	20.77193	21.37	0.35	0.96
20/4/2022	21:00	19.06	17.92479	19.87	1.13	0.81
20/4/2022	22:00	18.88	18.35119	18.57	0.52	0.31
20/4/2022	23:00	20.49	18.37357	18.69	2.11	1.80
21/4/2022	00:00	20.72	18.32363	18.49	2.39	2.22
PROMEDIO					0.82	0.75

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	63	70.8485	67.67	7.97	4.80
20/4/2022	02:00	64	71.14803	68.95	7.53	5.34
20/4/2022	03:00	64	71.55158	70.17	7.15	5.77
20/4/2022	04:00	65	71.88172	71.31	7.23	6.66
20/4/2022	05:00	65	72.21407	72.44	7.53	7.76
20/4/2022	06:00	64	72.52435	73.55	8.10	9.13
20/4/2022	07:00	64	72.69276	74.54	8.32	10.17
20/4/2022	08:00	64	71.34518	73.96	7.15	9.77
20/4/2022	09:00	64	70.10323	64.45	5.66	0.00
20/4/2022	10:00	64	66.14873	61.48	2.40	2.27
20/4/2022	11:00	64	61.90389	58.07	2.10	5.93
20/4/2022	12:00	64	60.06642	55.62	3.52	7.96
20/4/2022	13:00	63	63.59906	61.07	0.20	2.33
20/4/2022	14:00	63	64.06195	57.38	0.63	6.05
20/4/2022	15:00	63	65.69659	59.14	2.23	4.33
20/4/2022	16:00	60	63.67395	58.11	3.60	1.96
20/4/2022	17:00	60	68.7583	59.91	9.24	0.40
20/4/2022	18:00	59	61.21343	50.01	2.32	8.88
20/4/2022	19:00	59	65.76722	50.57	6.81	8.38
20/4/2022	20:00	57	68.88731	51.09	12.07	5.73
20/4/2022	21:00	59	74.08776	62.50	15.16	3.57
20/4/2022	22:00	60	70.57703	61.75	10.61	1.78
20/4/2022	23:00	58	70.36826	63.21	12.41	5.25
21/4/2022	00:00	60	70.54572	64.54	10.15	4.14
PROMEDIO					6.67	5.35

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	17.63	15.3288	15.42	2.30	2.21
20/4/2022	02:00	16.08	15.33548	15.23	0.75	0.85
20/4/2022	03:00	15.29	15.23752	15.08	0.05	0.21
20/4/2022	04:00	14.91	15.16878	14.94	0.25	0.02
20/4/2022	05:00	14.85	15.04387	14.79	0.20	0.06
20/4/2022	06:00	14.77	14.95811	14.63	0.18	0.14
20/4/2022	07:00	14.66	14.95192	14.52	0.29	0.15
20/4/2022	08:00	14.44	15.16309	14.75	0.72	0.30
20/4/2022	09:00	14.48	15.54345	15.28	1.06	0.80
20/4/2022	10:00	14.31	15.24182	15.48	0.93	1.16
20/4/2022	11:00	14.39	16.42254	15.96	2.03	1.57
20/4/2022	12:00	14.42	16.89097	16.89	2.47	2.47
20/4/2022	13:00	14.23	17.06506	17.26	2.84	3.03
20/4/2022	14:00	14.36	16.40576	17.04	2.05	2.69
20/4/2022	15:00	15.34	16.14178	16.61	0.80	1.26
20/4/2022	16:00	16.05	16.32655	16.37	0.28	0.32
20/4/2022	17:00	17.21	16.72598	16.67	0.48	0.54
20/4/2022	18:00	17.04	16.01213	16.45	1.02	0.58
20/4/2022	19:00	15.45	14.30194	15.11	1.15	0.34
20/4/2022	20:00	15.58	16.02085	14.82	0.44	0.76
20/4/2022	21:00	15.39	15.75695	15.25	0.37	0.14
20/4/2022	22:00	14.67	15.55326	15.04	0.89	0.37
20/4/2022	23:00	17.90	15.31178	14.79	2.59	3.11
21/4/2022	00:00	18.84	15.12301	14.53	3.71	4.30
PROMEDIO					1.16	1.14

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	69.21	73.40678	75.94	4.20	6.73
20/4/2022	02:00	71.65	74.8887	75.86	3.24	4.21
20/4/2022	03:00	74.32	74.08248	75.57	0.23	1.25
20/4/2022	04:00	75.93	73.61665	75.33	2.32	0.60
20/4/2022	05:00	75.70	73.7738	75.58	1.93	0.12
20/4/2022	06:00	75.69	74.1494	76.24	1.54	0.55
20/4/2022	07:00	75.06	73.97051	76.39	1.09	1.33
20/4/2022	08:00	74.84	72.94164	73.72	1.90	1.12
20/4/2022	09:00	74.65	70.39148	70.57	4.26	4.08
20/4/2022	10:00	74.68	71.37032	70.49	3.31	4.19
20/4/2022	11:00	74.82	66.05663	65.61	8.76	9.21
20/4/2022	12:00	74.19	63.56608	62.24	10.63	11.95
20/4/2022	13:00	74.91	63.70102	62.63	11.21	12.27
20/4/2022	14:00	73.79	67.41643	65.35	6.37	8.44
20/4/2022	15:00	68.95	69.07938	67.87	0.13	1.08
20/4/2022	16:00	64.93	66.96828	67.25	2.04	2.32
20/4/2022	17:00	61.81	68.47634	64.92	6.67	3.11
20/4/2022	18:00	62.70	72.05399	70.70	9.36	8.00
20/4/2022	19:00	71.74	78.75619	78.63	7.01	6.89
20/4/2022	20:00	69.33	71.65739	74.50	2.33	5.17
20/4/2022	21:00	68.90	73.88671	76.62	4.99	7.72
20/4/2022	22:00	76.43	73.66792	77.02	2.76	0.59
20/4/2022	23:00	67.90	71.37185	75.36	3.47	7.46
21/4/2022	00:00	63.89	70.91166	74.68	7.02	10.79
PROMEDIO					4.45	4.97

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	17.633004	18.45004	17.32	0.82	0.31
20/4/2022	02:00	17.540443	18.39723	17.05	0.86	0.49
20/4/2022	03:00	17.417259	18.27142	16.80	0.85	0.61
20/4/2022	04:00	17.317361	18.17854	16.57	0.86	0.75
20/4/2022	05:00	17.217667	18.06923	16.33	0.85	0.88
20/4/2022	06:00	16.881593	17.96618	16.10	1.08	0.78
20/4/2022	07:00	16.820701	17.93873	15.91	1.12	0.91
20/4/2022	08:00	16.904430	16.018	15.93	0.89	0.98
20/4/2022	09:00	17.049363	16.51941	16.29	0.53	0.76
20/4/2022	10:00	17.171735	17.36777	17.05	0.20	0.13
20/4/2022	11:00	17.532892	18.48063	18.14	0.95	0.61
20/4/2022	12:00	18.028983	18.91116	19.17	0.88	1.14
20/4/2022	13:00	19.028718	19.08462	19.64	0.06	0.61
20/4/2022	14:00	18.145518	17.01636	18.67	1.13	0.53
20/4/2022	15:00	17.974037	16.68439	17.44	1.29	0.53
20/4/2022	16:00	18.199784	18.28441	18.08	0.08	0.12
20/4/2022	17:00	19.610943	17.36935	18.71	2.24	0.90
20/4/2022	18:00	20.158049	19.38757	18.75	0.77	1.41
20/4/2022	19:00	19.931306	19.62061	18.79	0.31	1.14
20/4/2022	20:00	18.524832	15.80433	17.60	2.72	0.93
20/4/2022	21:00	17.872980	16.07855	16.51	1.79	1.37
20/4/2022	22:00	17.671657	18.2969	16.88	0.63	0.79
20/4/2022	23:00	17.571281	18.48174	17.20	0.91	0.37
21/4/2022	00:00	17.455709	18.48442	16.87	1.03	0.59
PROMEDIO					0.95	0.73

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	61.543775	63.90932	71.50	2.37	9.95
20/4/2022	02:00	62.630201	64.12809	72.71	1.50	10.08
20/4/2022	03:00	62.272128	64.65401	73.79	2.38	11.52
20/4/2022	04:00	61.897779	65.04943	74.73	3.15	12.84
20/4/2022	05:00	62.853996	65.51521	75.71	2.66	12.86
20/4/2022	06:00	62.109368	65.95913	76.72	3.85	14.61
20/4/2022	07:00	61.897779	66.09075	77.39	4.19	15.49
20/4/2022	08:00	61.254875	71.35719	69.21	10.10	7.95
20/4/2022	09:00	62.585442	67.80937	65.91	5.22	3.33
20/4/2022	10:00	62.316887	64.21218	61.48	1.90	0.83
20/4/2022	11:00	60.542798	60.03341	57.00	0.51	3.54
20/4/2022	12:00	57.784009	58.18276	53.79	0.40	3.99
20/4/2022	13:00	55.639643	58.30255	53.79	2.66	1.85
20/4/2022	14:00	57.548007	64.98854	62.02	7.44	4.47
20/4/2022	15:00	60.514315	66.7585	64.27	6.24	3.76
20/4/2022	16:00	58.573397	61.09375	57.16	2.52	1.41
20/4/2022	17:00	56.009923	66.33386	59.04	10.32	3.03
20/4/2022	18:00	54.187007	58.81071	58.21	4.62	4.02
20/4/2022	19:00	60.241692	57.91654	60.70	2.33	0.46
20/4/2022	20:00	64.877922	75.31725	68.54	10.44	3.67
20/4/2022	21:00	65.576164	74.22314	70.72	8.65	5.14
20/4/2022	22:00	64.884433	64.61367	67.17	0.27	2.29
20/4/2022	23:00	64.449048	63.81803	68.74	0.63	4.29
21/4/2022	00:00	64.978020	63.79255	69.92	1.19	4.94
PROMEDIO					3.98	6.10

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	15.676375	16.4684	17.12	0.79	1.45
20/4/2022	02:00	15.676375	16.40976	16.95	0.73	1.27
20/4/2022	03:00	15.557248	16.3459	16.77	0.79	1.22
20/4/2022	04:00	15.416084	16.28804	16.60	0.87	1.18
20/4/2022	05:00	15.408672	16.23162	16.42	0.82	1.01
20/4/2022	06:00	15.356754	16.1803	16.24	0.82	0.89
20/4/2022	07:00	15.282673	16.15268	16.08	0.87	0.79
20/4/2022	08:00	15.216082	14.43071	15.37	0.79	0.16
20/4/2022	09:00	15.083146	14.85158	14.84	0.23	0.24
20/4/2022	10:00	15.134892	14.97564	14.91	0.16	0.23
20/4/2022	11:00	14.994620	16.20298	15.40	1.21	0.40
20/4/2022	12:00	14.935701	16.61735	16.27	1.68	1.33
20/4/2022	13:00	14.884199	16.7379	16.72	1.85	1.84
20/4/2022	14:00	14.847444	15.91451	16.69	1.07	1.84
20/4/2022	15:00	14.935706	15.57568	16.36	0.64	1.43
20/4/2022	16:00	14.957800	15.81265	16.28	0.85	1.33
20/4/2022	17:00	15.097888	14.79977	16.17	0.30	1.08
20/4/2022	18:00	15.253075	15.01478	16.30	0.24	1.04
20/4/2022	19:00	15.423619	14.7378	16.47	0.69	1.05
20/4/2022	20:00	15.460628	14.33093	16.20	1.13	0.74
20/4/2022	21:00	15.527516	14.20324	15.98	1.32	0.45
20/4/2022	22:00	15.616775	16.13974	16.78	0.52	1.16
20/4/2022	23:00	15.698741	16.4397	17.59	0.74	1.90
21/4/2022	00:00	15.721118	16.52127	17.39	0.80	1.67
PROMEDIO					0.83	1.07

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	69.628899	70.57374	72.90	0.94	3.27
20/4/2022	02:00	68.469231	70.84526	74.22	2.38	5.76
20/4/2022	03:00	67.626945	71.15348	75.52	3.53	7.89
20/4/2022	04:00	66.227206	71.43536	76.78	5.21	10.55
20/4/2022	05:00	65.429680	71.71168	78.04	6.28	12.61
20/4/2022	06:00	66.467278	71.96646	79.29	5.50	12.82
20/4/2022	07:00	67.004387	72.11256	80.48	5.11	13.47
20/4/2022	08:00	66.870110	76.64062	75.78	9.77	8.91
20/4/2022	09:00	68.473300	73.44043	73.32	4.97	4.84
20/4/2022	10:00	69.657382	72.59265	72.93	2.94	3.27
20/4/2022	11:00	69.934075	66.98691	68.20	2.95	1.74
20/4/2022	12:00	69.913729	64.67622	64.84	5.24	5.07
20/4/2022	13:00	69.913729	65.02502	64.36	4.89	5.55
20/4/2022	14:00	69.893384	69.5754	66.56	0.32	3.34
20/4/2022	15:00	70.222974	71.63154	68.73	1.41	1.49
20/4/2022	16:00	70.857740	69.18752	67.13	1.67	3.73
20/4/2022	17:00	70.967603	75.66353	69.31	4.70	1.66
20/4/2022	18:00	67.867017	75.0666	67.54	7.20	0.33
20/4/2022	19:00	66.487623	76.48729	68.90	10.00	2.42
20/4/2022	20:00	65.616854	80.03423	70.92	14.42	5.30
20/4/2022	21:00	65.930168	81.62269	73.09	15.69	7.16
20/4/2022	22:00	65.315748	72.1616	65.71	6.85	0.39
20/4/2022	23:00	65.132642	70.74458	67.05	5.61	1.92
21/4/2022	00:00	65.759270	70.36053	68.35	4.60	2.59
PROMEDIO					5.51	5.25

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	15.58	15.19198	16.27	0.39	0.69
20/4/2022	02:00	15.50	15.05783	15.98	0.44	0.49
20/4/2022	03:00	15.08	14.92037	15.73	0.16	0.65
20/4/2022	04:00	15.24	14.80201	15.49	0.44	0.25
20/4/2022	05:00	14.97	14.68047	15.26	0.28	0.29
20/4/2022	06:00	15.11	14.56532	15.03	0.54	0.08
20/4/2022	07:00	15.22	14.52055	14.85	0.70	0.37
20/4/2022	08:00	15.71	14.34556	14.80	1.37	0.92
20/4/2022	09:00	16.04	14.92299	15.18	1.11	0.85
20/4/2022	10:00	16.75	15.9534	16.06	0.79	0.68
20/4/2022	11:00	16.39	17.28471	17.27	0.90	0.88
20/4/2022	12:00	16.37	17.82332	17.92	1.46	1.56
20/4/2022	13:00	16.42	18.02906	18.01	1.61	1.59
20/4/2022	14:00	15.80	16.56419	17.99	0.77	2.19
20/4/2022	15:00	15.98	16.219	17.59	0.24	1.60
20/4/2022	16:00	16.63	17.1699	17.89	0.54	1.25
20/4/2022	17:00	15.75	16.1534	18.09	0.40	2.34
20/4/2022	18:00	15.52	15.24846	17.17	0.27	1.65
20/4/2022	19:00	15.39	14.75648	16.16	0.63	0.78
20/4/2022	20:00	15.39	14.28583	15.56	1.10	0.17
20/4/2022	21:00	15.36	14.09011	14.73	1.27	0.63
20/4/2022	22:00	15.14	15.48465	15.34	0.35	0.21
20/4/2022	23:00	15.00	15.55781	16.38	0.56	1.38
21/4/2022	00:00	14.90	15.37749	15.98	0.48	1.08
PROMEDIO					0.70	0.94

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	71.423332	76.63251	76.03	5.21	4.60
20/4/2022	02:00	70.906568	77.305	77.26	6.40	6.36
20/4/2022	03:00	71.818026	78.01367	78.37	6.20	6.55
20/4/2022	04:00	70.442701	78.63213	79.31	8.19	8.87
20/4/2022	05:00	71.435539	79.27216	80.30	7.84	8.87
20/4/2022	06:00	70.548495	79.88569	81.32	9.34	10.77
20/4/2022	07:00	70.149732	80.13843	81.88	9.99	11.73
20/4/2022	08:00	70.259595	76.96505	74.86	6.71	4.60
20/4/2022	09:00	67.663567	73.06828	70.43	5.40	2.76
20/4/2022	10:00	64.567050	68.28059	65.47	3.71	0.90
20/4/2022	11:00	63.960767	62.74169	59.94	1.22	4.02
20/4/2022	12:00	63.675936	60.22098	59.89	3.45	3.79
20/4/2022	13:00	64.180494	60.20798	59.21	3.97	4.97
20/4/2022	14:00	68.774406	66.75282	61.38	2.02	7.40
20/4/2022	15:00	67.252597	68.74069	63.82	1.49	3.43
20/4/2022	16:00	64.270012	63.68257	59.04	0.59	5.23
20/4/2022	17:00	71.008293	69.56826	61.85	1.44	9.15
20/4/2022	18:00	70.808912	74.07114	67.81	3.26	3.00
20/4/2022	19:00	71.297193	76.47498	71.57	5.18	0.27
20/4/2022	20:00	72.823072	80.42008	74.39	7.60	1.57
20/4/2022	21:00	72.611483	82.3157	82.19	9.70	9.57
20/4/2022	22:00	71.138501	75.28964	70.62	4.15	0.51
20/4/2022	23:00	69.384758	74.89683	72.39	5.51	3.01
21/4/2022	00:00	70.491529	75.75064	73.66	5.26	3.17
PROMEDIO					5.16	5.21

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
26/6/2022	01:00	12.141410	11.09944	12.98	1.04	0.84
26/6/2022	02:00	12.056783	11.3039	12.56	0.75	0.51
26/6/2022	03:00	11.768716	10.94282	12.17	0.83	0.40
26/6/2022	04:00	11.670349	10.67888	11.74	0.99	0.07
26/6/2022	05:00	11.656129	10.42142	11.34	1.23	0.31
26/6/2022	06:00	11.299603	10.2638	11.02	1.04	0.28
26/6/2022	07:00	11.083640	10.12704	10.75	0.96	0.33
26/6/2022	08:00	11.348464	10.26698	10.88	1.08	0.47
26/6/2022	09:00	11.895578	10.68172	11.46	1.21	0.44
26/6/2022	10:00	13.193929	12.46092	12.54	0.73	0.65
26/6/2022	11:00	12.701296	13.0805	13.94	0.38	1.24
26/6/2022	12:00	12.901174	13.26366	14.86	0.36	1.95
26/6/2022	13:00	13.358864	13.67377	15.45	0.31	2.10
26/6/2022	14:00	13.754756	13.95012	16.11	0.20	2.36
26/6/2022	15:00	13.279607	13.89101	16.59	0.61	3.31
26/6/2022	16:00	13.014654	13.66336	16.77	0.65	3.76
26/6/2022	17:00	12.943722	13.47538	16.71	0.53	3.77
26/6/2022	18:00	12.353732	12.27736	16.14	0.08	3.79
26/6/2022	19:00	12.226292	11.61552	14.86	0.61	2.64
26/6/2022	20:00	12.388812	11.6949	13.93	0.69	1.54
26/6/2022	21:00	12.311283	11.65761	13.68	0.65	1.37
26/6/2022	22:00	11.873865	11.40728	13.36	0.47	1.49
26/6/2022	23:00	11.789630	10.99068	12.84	0.80	1.05
27/6/2022	00:00	11.635302	10.46786	12.21	1.17	0.57
PROMEDIO					0.72	1.47

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
26/6/2022	01:00	70.027662	77.4147	72.03	7.39	2.01
26/6/2022	02:00	70.471184	78.13019	72.88	7.66	2.41
26/6/2022	03:00	72.534172	80.76811	75.29	8.23	2.75
26/6/2022	04:00	74.426262	83.90998	79.02	9.48	4.60
26/6/2022	05:00	73.783358	84.66063	81.03	10.88	7.24
26/6/2022	06:00	74.495435	84.63968	81.59	10.14	7.09
26/6/2022	07:00	76.704908	85.85902	82.92	9.15	6.21
26/6/2022	08:00	74.829094	84.9969	80.58	10.17	5.75
26/6/2022	09:00	71.240227	82.48487	76.73	11.24	5.49
26/6/2022	10:00	58.109532	67.69627	65.64	9.59	7.53
26/6/2022	11:00	54.101559	57.45209	53.58	3.35	0.53
26/6/2022	12:00	53.763831	56.2112	49.46	2.45	4.31
26/6/2022	13:00	52.632646	55.04342	47.92	2.41	4.71
26/6/2022	14:00	49.491370	52.41506	45.02	2.92	4.47
26/6/2022	15:00	52.954098	53.59993	44.09	0.65	8.86
26/6/2022	16:00	54.536943	55.66537	45.22	1.13	9.32
26/6/2022	17:00	56.811518	58.15339	46.88	1.34	9.94
26/6/2022	18:00	63.891594	66.54945	52.47	2.66	11.42
26/6/2022	19:00	65.645337	72.28568	60.92	6.64	4.72
26/6/2022	20:00	65.100090	72.57162	63.26	7.47	1.84
26/6/2022	21:00	64.139804	70.97079	63.04	6.83	1.10
26/6/2022	22:00	61.092115	67.63858	61.53	6.55	0.44
26/6/2022	23:00	63.806145	70.60837	63.08	6.80	0.73
27/6/2022	00:00	66.149895	74.87881	68.10	8.73	1.95
PROMEDIO					6.41	4.81

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	18.05166533	18.21029	18.46	0.16	0.41
20/4/2022	02:00	17.99719367	18.13008	18.40	0.13	0.40
20/4/2022	03:00	17.98164433	18.04994	18.34	0.07	0.36
20/4/2022	04:00	17.99719367	17.9765	18.28	0.02	0.28
20/4/2022	05:00	17.966102	17.90633	18.21	0.06	0.25
20/4/2022	06:00	17.942792	17.84038	18.14	0.10	0.20
20/4/2022	07:00	17.896207	17.786	18.08	0.11	0.19
20/4/2022	08:00	17.86517133	16.36477	17.85	1.50	0.01
20/4/2022	09:00	17.818656	16.83088	17.77	0.99	0.05
20/4/2022	10:00	17.795415	17.59464	18.11	0.20	0.31
20/4/2022	11:00	17.76444067	17.19127	17.78	0.57	0.01
20/4/2022	12:00	17.74122733	17.56439	18.28	0.18	0.54
20/4/2022	13:00	17.72575417	17.63608	19.40	0.09	1.68
20/4/2022	14:00	17.694815	17.0143	19.37	0.68	1.68
20/4/2022	15:00	17.65617667	16.73894	19.14	0.92	1.48
20/4/2022	16:00	17.64073733	16.89922	18.16	0.74	0.52
20/4/2022	17:00	17.57898	16.11446	17.13	1.46	0.45
20/4/2022	18:00	17.594426	16.78481	17.48	0.81	0.11
20/4/2022	19:00	17.594426	16.56759	17.88	1.03	0.29
20/4/2022	20:00	17.62528467	16.03806	17.66	1.59	0.03
20/4/2022	21:00	17.617565	17.90098	17.83	0.28	0.21
20/4/2022	22:00	17.617565	18.27353	18.04	0.66	0.42
20/4/2022	23:00	17.62528467	18.34914	17.97	0.72	0.35
21/4/2022	00:00	17.57898	18.29248	17.91	0.71	0.33
PROMEDIO					0.57	0.44

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	61.16942567	63.71312	70.51	2.54	9.34
20/4/2022	02:00	62.1948165	64.04178	71.63	1.85	9.44
20/4/2022	03:00	62.784823	64.38277	72.69	1.60	9.90
20/4/2022	04:00	62.99641183	64.69809	73.68	1.70	10.69
20/4/2022	05:00	63.122551	65.00152	74.65	1.88	11.53
20/4/2022	06:00	63.30158717	65.28984	75.59	1.99	12.29
20/4/2022	07:00	63.3544845	65.5313	76.46	2.18	13.10
20/4/2022	08:00	63.39110567	68.98833	63.91	5.60	0.52
20/4/2022	09:00	63.38296767	65.77715	68.91	2.39	5.53
20/4/2022	10:00	63.27310417	62.559	59.66	0.71	3.62
20/4/2022	11:00	63.05337783	63.00975	63.96	0.04	0.91
20/4/2022	12:00	63.073723	60.95002	55.63	2.12	7.44
20/4/2022	13:00	62.91910033	61.35781	55.42	1.56	7.50
20/4/2022	14:00	62.805168	64.81032	56.92	2.01	5.89
20/4/2022	15:00	62.67496	66.48773	58.35	3.81	4.32
20/4/2022	16:00	62.772616	64.65875	64.19	1.89	1.42
20/4/2022	17:00	62.70751183	69.42673	66.06	6.72	3.36
20/4/2022	18:00	62.63833867	67.98595	70.04	5.35	7.40
20/4/2022	19:00	62.42268117	69.12258	64.14	6.70	1.72
20/4/2022	20:00	62.373853	72.82319	65.56	10.45	3.19
20/4/2022	21:00	62.406405	65.06504	66.95	2.66	4.55
20/4/2022	22:00	62.487785	63.51524	66.77	1.03	4.29
20/4/2022	23:00	62.32502483	63.19684	68.03	0.87	5.71
21/4/2022	00:00	62.68716667	63.40603	69.17	0.72	6.48
PROMEDIO					2.85	6.25

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	17.541520	19.28355	17.78	1.74	0.24
20/4/2022	02:00	17.973884	19.21571	17.69	1.24	0.28
20/4/2022	03:00	18.004989	19.13909	17.61	1.13	0.40
20/4/2022	04:00	17.911735	19.06866	17.52	1.16	0.39
20/4/2022	05:00	17.803210	18.99954	17.43	1.20	0.37
20/4/2022	06:00	17.509659	18.93343	17.34	1.42	0.17
20/4/2022	07:00	17.455709	18.88525	17.25	1.43	0.21
20/4/2022	08:00	17.440351	17.04598	17.17	0.39	0.27
20/4/2022	09:00	17.363464	17.52927	17.29	0.17	0.08
20/4/2022	10:00	17.057042	16.59334	16.64	0.46	0.42
20/4/2022	11:00	17.095242	17.44275	16.21	0.35	0.88
20/4/2022	12:00	16.912128	17.77795	16.80	0.87	0.11
20/4/2022	13:00	16.896841	17.92144	17.06	1.02	0.16
20/4/2022	14:00	16.835956	17.0321	16.94	0.20	0.10
20/4/2022	15:00	16.151060	16.75155	16.60	0.60	0.45
20/4/2022	16:00	17.268354	17.21587	16.45	0.05	0.82
20/4/2022	17:00	19.138022	16.49984	16.30	2.64	2.84
20/4/2022	18:00	18.027295	17.4265	16.80	0.60	1.23
20/4/2022	19:00	19.296874	17.23882	17.36	2.06	1.94
20/4/2022	20:00	17.088123	17.14959	17.17	0.06	0.08
20/4/2022	21:00	16.254265	17.07434	17.06	0.82	0.80
20/4/2022	22:00	17.593412	18.99811	17.15	1.40	0.44
20/4/2022	23:00	18.915587	19.20965	17.26	0.29	1.66
21/4/2022	00:00	17.230155	19.30211	17.18	2.07	0.05
PROMEDIO					0.97	0.60

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	65.291334	61.23738	71.71	4.05	6.42
20/4/2022	02:00	65.405266	61.50322	73.07	3.90	7.66
20/4/2022	03:00	63.964836	61.81455	74.39	2.15	10.43
20/4/2022	04:00	63.419589	62.1032	75.68	1.32	12.26
20/4/2022	05:00	62.756340	62.38806	76.95	0.37	14.19
20/4/2022	06:00	63.061516	62.66321	78.21	0.40	15.15
20/4/2022	07:00	63.557935	62.86877	79.41	0.69	15.85
20/4/2022	08:00	62.951653	67.62456	65.05	4.67	2.10
20/4/2022	09:00	62.491854	64.30249	62.44	1.81	0.05
20/4/2022	10:00	62.577304	65.64861	68.51	3.07	5.93
20/4/2022	11:00	62.084953	61.93285	65.48	0.15	3.39
20/4/2022	12:00	62.455233	60.12147	63.23	2.33	0.77
20/4/2022	13:00	62.406405	60.26455	63.34	2.14	0.93
20/4/2022	14:00	62.443026	64.73755	65.58	2.29	3.13
20/4/2022	15:00	65.279127	66.43461	67.73	1.16	2.45
20/4/2022	16:00	64.335116	63.34732	66.82	0.99	2.48
20/4/2022	17:00	58.512362	67.73505	68.72	9.22	10.21
20/4/2022	18:00	58.618157	66.49264	63.94	7.87	5.32
20/4/2022	19:00	55.476883	67.62317	65.02	12.15	9.55
20/4/2022	20:00	61.181633	69.28188	66.48	8.10	5.29
20/4/2022	21:00	67.667635	70.34882	67.90	2.68	0.23
20/4/2022	22:00	63.456210	62.4073	67.93	1.05	4.47
20/4/2022	23:00	57.076002	61.54857	69.36	4.47	12.28
21/4/2022	00:00	66.418449	61.17978	70.73	5.24	4.31
PROMEDIO					3.43	6.45

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Temperatura

fecha	Hora	temperatura medida	temperatura simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	19.18506583	19.20546	18.13	0.02	1.06
20/4/2022	02:00	19.14528267	19.1366	18.01	0.01	1.13
20/4/2022	03:00	19.14528267	19.05881	17.90	0.09	1.24
20/4/2022	04:00	19.12143117	18.98405	17.79	0.14	1.33
20/4/2022	05:00	19.04198017	18.90958	17.68	0.13	1.37
20/4/2022	06:00	18.915209	18.83681	17.56	0.08	1.35
20/4/2022	07:00	18.78863983	18.77333	17.45	0.02	1.33
20/4/2022	08:00	18.6388265	17.08256	17.25	1.56	1.39
20/4/2022	09:00	18.48943317	17.55154	17.25	0.94	1.24
20/4/2022	10:00	18.36396367	16.68782	16.69	1.68	1.67
20/4/2022	11:00	18.30134867	17.5419	16.35	0.76	1.95
20/4/2022	12:00	18.176347	17.87205	16.97	0.30	1.21
20/4/2022	13:00	18.06726367	17.99271	17.29	0.07	0.78
20/4/2022	14:00	17.93503833	17.41657	17.24	0.52	0.69
20/4/2022	15:00	17.78777767	17.17103	16.96	0.62	0.83
20/4/2022	16:00	17.75670767	18.85455	17.84	1.10	0.09
20/4/2022	17:00	17.81866267	18.18294	18.76	0.36	0.94
20/4/2022	18:00	17.896207	17.63124	18.32	0.26	0.43
20/4/2022	19:00	18.04393267	17.38942	17.83	0.65	0.22
20/4/2022	20:00	18.324893	16.77801	17.56	1.55	0.77
20/4/2022	21:00	18.56017033	16.65438	17.40	1.91	1.16
20/4/2022	22:00	18.88360417	18.8411	17.70	0.04	1.18
20/4/2022	23:00	19.09758733	19.14449	18.02	0.05	1.07
21/4/2022	00:00	19.09764883	19.24357	17.90	0.15	1.20
PROMEDIO					0.54	1.07

Humedad

fecha	Hora	Humedad medida	Humedad simulada		Diferencia	
			Design Builder	Ecodesigner	Design Builder	Ecodesigner
20/4/2022	01:00	54.46776983	60.6065	70.05	6.14	15.59
20/4/2022	02:00	55.48095317	60.87362	71.42	5.39	15.94
20/4/2022	03:00	56.12792217	61.18642	72.74	5.06	16.62
20/4/2022	04:00	56.44530483	61.48893	74.01	5.04	17.57
20/4/2022	05:00	56.36392483	61.79179	75.26	5.43	18.89
20/4/2022	06:00	56.3069585	62.0903	76.49	5.78	20.18
20/4/2022	07:00	56.38020083	62.35378	77.64	5.97	21.26
20/4/2022	08:00	56.457512	66.46112	65.22	10.00	8.76
20/4/2022	09:00	56.498202	63.28399	62.54	6.79	6.04
20/4/2022	10:00	56.494133	65.18004	67.96	8.69	11.47
20/4/2022	11:00	56.73420433	61.54226	64.83	4.81	8.09
20/4/2022	12:00	56.888827	59.76589	62.47	2.88	5.59
20/4/2022	13:00	56.913241	59.99492	62.25	3.08	5.33
20/4/2022	14:00	57.08413967	63.17959	64.18	6.10	7.09
20/4/2022	15:00	57.263176	64.6904	66.11	7.43	8.85
20/4/2022	16:00	57.21434783	58.58157	57.35	1.37	0.13
20/4/2022	17:00	56.7219975	62.67405	58.52	5.95	1.80
20/4/2022	18:00	56.43716683	65.14417	61.88	8.71	5.44
20/4/2022	19:00	56.7464115	66.10603	63.30	9.36	6.56
20/4/2022	20:00	56.68537633	69.93687	64.95	13.25	8.26
20/4/2022	21:00	57.1248295	71.16192	66.57	14.04	9.44
20/4/2022	22:00	56.958	62.08203	64.60	5.12	7.64
20/4/2022	23:00	55.9326115	60.86874	66.07	4.94	10.14
21/4/2022	00:00	55.12694883	60.47879	67.45	5.35	12.33
PROMEDIO					6.53	10.38